

WHAT IS CLAIMED IS:

1. A component operating with bulk acoustic waves, comprising:  
an acoustic mirror comprising an electrically conductive mirror layer that acts as a coupling layer;  
a signal path along which an electrical signal is guided; and  
a number  $N$  of resonators that are electrically connected to one another and each having a lower and an upper electrode, with  $n$  resonators, where  $2 \leq n \leq N - 1$ , being arranged jointly and alongside one another on the acoustic mirror, the  $n$  resonators being coupled to one another via coupling capacitances that are formed: a) by lower electrodes of the  $n$  resonators, and b) by at least one of the coupling layer and further capacitively coupled electrically conductive mirror layers, with the  $n$  resonators being arranged and electrically connected to one another such that the coupling capacitance does not bridge any of the resonators in the signal path.
2. The component as claimed in claim 1, wherein two resonators that are arranged in the signal path and are capacitively coupled to one another via their lower electrode are in each case either: a) not electrically connected to one another, or b) are electrically connected to one another only via the lower electrode.
3. The component as claimed in claim 1, further comprising further electrically conductive mirror layers.
4. The component as claimed in claim 3, wherein at least one of the further electrically conductive mirror layers acts as a further coupling layer.

5. The component as claimed in claim 3, wherein two or more of the electrically conductive mirror layers are structured, with at least two of the structured electrically conductive mirror layers being capacitively coupled to one another.
6. The component as claimed in claim 5, wherein the resonators that are arranged on the acoustic mirror are capacitively coupled to one another via the capacitively coupled structured mirror layers.
7. The component as claimed in claim 3, wherein at least some of the  $n$  resonators are in the form of series resonators.
8. The component as claimed in claim 1, wherein the  $n$  resonators are in the form of parallel resonators.
9. The component as claimed in claim 8, further comprising an inductance via which the parallel resonators are each connected to ground.
10. The component as claimed in claim 1, wherein:
  - at least some of the  $n$  resonators are in the form of series resonators;
  - at least some of the  $n$  resonators are in the form of parallel resonators; and
  - the series resonators are capacitively decoupled from the parallel resonators and are at least partially capacitively decoupled from one another, with the series resonators each being arranged on separate further acoustic mirrors or on a further acoustic mirror in which all of the electrically conductive mirror layers are structured.
11. The component as claimed in claim 1, wherein:

at least some of the  $n$  resonators are in the form of series resonators;  
at least some of the  $n$  resonators are in the form of parallel resonators; and  
in which the series resonators are capacitively decoupled from the parallel resonators, and at least some of the series resonators are capacitively coupled to one another, with the series resonators being arranged jointly on a further acoustic mirror.

12. The component as claimed in claim 1, further comprising a carrier substrate on which the acoustic mirror is arranged

13. The component as claimed in claim 12, wherein the carrier substrate comprises two or more dielectric layers, with a metallization level being provided between each two successive dielectric layers.